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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/434,654	11/05/99	RYAN K	303.306US4

EXAMINER	
PEIKARI, B	
ART UNIT	**PAPER NUMBER**
2186	8

DATE MAILED: 09/27/01

TM02/0927
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Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

PTO-90C (Rev. 2/95)
*U.S. GPO: 2000-473-000/44602

1- File Copy

Office Action Summary

Application No.	Applicant(s)
09/434,654	Ryan
Examiner	**Art Unit**
B. James Peikari	2186

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on Nov 5, 1999

2a) ☐ This action is **FINAL.** 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 13-16 and 32-54 is/are pending in the applica

4a) Of the above, claim(s) _____ is/are withdrawn from considera

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 13-16 and 32-54 is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claims _____ are subject to restriction and/or election requirem

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ☐ All b) ☐ Some* c) ☐ None of:

1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

*See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

15) ☐ Notice of References Cited (PTO-892)

16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)

17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 2,4,6,7

18) ☐ Interview Summary (PTO-413) Paper No(s). _____

19) ☐ Notice of Informal Patent Application (PTO-152)

20) ☐ Other:

DETAILED ACTION

Specification

1. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 36-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Katayama et al., U.S. 5,875,452.

Katayama et al. teach the claimed invention in a memory system comprising memory modules with a unidirectional command and address bus (*note that both the ROW-Add and COL-Add lines of the address bus are unidirectional, further, all command inputs to clock generator 30 are unidirectional*), a bidirectional data bus (*note that data I/O is bidirectional*), a plurality of memory devices (*note the use of two exemplary DRAM devices 22*), a buffer register coupled between the command and address bus and the plurality of memory devices for receiving and

latching commands and addresses (*note the combination of column address buffers 34 and 44 and row address buffers 32 and 36; note also columns 17-18, which state, "The row decode buffer 36 corresponds to an address buffer ... The column decode buffer 44 also corresponds to the address buffer"*), a data register connected between the plurality of memory devices and the bidirectional data bus for receiving and latching read data or write data (*note the combination of read buffer 54 and write buffer 52, note also column 18, which states, "The read buffer 54 and the write buffer 52 correspond to a data buffer according to this invention, and are connected to the data bus"*). As for the claimed pipelined packet protocol, note column 2, lines 34 et seq. and column 20, line 6.

As for the feature of *each* memory device containing a data in and a data out buffer, a column decoder and a row decoder, it was noted in St. Regis Paper Co. v Bemis Co. 193 USPQ 8 (7th Cir. 1977) that to duplicate parts for multiple effects is *not* given patentable weight. In any case, Figure 9 shows an embodiment of the Katayama et al. system which clearly displays dedicated row and column decoder circuitry for each of the plurality of memory devices 22. In fact, it is clear from the description that each of the devices 22 in Figure 2 have similar dedicated circuitry, although this was not shown in the drawing. Further, the plurality of groups of sense amps 28 (note column 17, lines 12-14) in Figure 2 would have required multiple dedicated read and write buffers 54 and 52.

As for a connector connecting these various elements via a socket, such was not specifically mentioned in the Katayama et al. system, however column 16, lines 52-60, shows that

these elements are, in fact, "connected". Furthermore, the use of sockets for connecting modules in data processing systems was well known at the time of the invention. It would have been obvious to one having ordinary skill in the art at the time the invention was made to include at least a socket to connect various elements of Katayama et al., with all of the peripheral circuitry, since this would have made connecting and disconnecting elements (for maintenance, upgrading, etc.) much faster.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321© may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 13-16 and 32-55 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 50-54 of copending Application No. 09/434,731. Although the conflicting claims are not identical, they are not patentably distinct from each other because both are limited to the use of a single socket.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented. The prohibition against holdings of double patenting applies to requirements for restriction between the related subjects treated in MPEP 806.04 through 806.05(I), namely, between combination and subcombination thereof, between subcombinations disclosed as usable together, between process and apparatus for its practice, between process and product made by such process and between apparatus and product made by such apparatus,,etc., so long as the claims in each case are filed as a result of such requirement.

Note:

The following are situations where the prohibition of double patenting rejections under 35 U.S.C. 121 does not apply: ...

(b) The claims of the different applications or patents are not consonant with the restriction requirement made by the examiner, since the claims have been changed in material respects from the claims at the time the requirement was made. For example, the divisional application filed includes additional claims not consonant in scope to the original claims subject to restriction in the parent. Symbol Technologies, Inc. v. Opticon, Inc. , 935 F.2d 1569, 19 USPQ2d 1241 (Fed. Cir. 1991); Gerber Garment Technology, Inc. v . Lectra Systems Inc. , 916 F.2d 683, 16 USPQ2d 1436 (Fed. Cir. 1990). In order for consonance to exist, the line of demarcation between the independent and distinct inventions identified by the examiner in the requirement for restriction must be maintained. Gerber , supra.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Peikari whose telephone number is (703) 305-3824.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Kim, can be reached at (703) 305-3821.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 308-9051 (for formal communications intended for entry)

or:

(703) 305-9731 (for informal or draft communications, please label "PROPOSED" or "DRAFT")

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington. VA., Sixth Floor (Receptionist).

B. James Peikari
Primary Examiner
Art Unit 2186

September 25, 2001